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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,078	06/30/2005	Hermann Bodinger	4001-1190	8279
466 7590 02/12/2008 YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			EXAMINER KOSLOW, CAROL M	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 02/12/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/516,078

Applicant(s)

BODINGER ET AL.

Examiner

C. Melissa Koslow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

This action is in response to applicant's amendment of 13 December 2007. The amendment to claim 2 has overcome the 35 USC 112 rejections and art rejections over this claim. The amendment to claims have overcome the objection to claims and the 35 USC 112, second paragraph rejection with respect to the definition the variables a, x and y and over claim 8 as to the process. Applicant's arguments with respect to the remaining rejections have been fully considered but they are not persuasive.

The amendment filed 13 December 2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

“where a is greater than zero”.

While the originally filed disclosure does support stating x and y are greater than zero since it teaches the ceramic is a PZT based ceramic, there is no teaching or suggestion in the originally filed that a is greater than zero. Thus the teaching that a is greater than zero is greater than zero is new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

The fact that lead must be present does not support stating a is greater than zero. For lead to be present “a” cannot equal 1. Lead will be present if a is zero. Thus applicant's arguments with respect to this insertion do not show that the definition of a as being greater than 0 is not new matter.

The disclosure is objected to because of the following informalities:

The upper limit of x and y are not given and cannot be determined for the information disclosed in the specification. Page 8, lines 12-13 teach in one embodiment, $x+y+z=1$, which indicates that applicant intends for the inventive composition to include compositions where $x+y+z$ is not equal to 1. In addition, the specification teaches the composition can be non-stoichiometric, which means $x+y+z$ need not equal to 1. Therefore it is unclear what x and y ranges applicant considers as his invention. Appropriate correction is required.

Claims 1, 12 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 12 and 13 teaches the metallization is selected from silver, copper, an alloy or silver/copper and alloys of silver/palladium; copper/palladium and silver/copper/palladium, where the amount of palladium in these alloys is greater than 0 up to 30%. Page 11 teaches the metallization can be silver, copper, an alloy, silver/copper or an alloy of silver and palladium, where the content of palladium is greater than 0 up to 30%. This does not support the claimed composition of alloys of copper/palladium and silver/ copper/palladium, where the amount of palladium in these alloys is greater than 0 up to 30%.

The added limitation to claim 1 that “a” is greater than zero is new matter for the reasons given above.

The fact that the scope of claim 12 is clear does not mean that it meets the written description requirement of the first paragraph of 35 USC 112. The claimed embodiments of

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alloys of copper/palladium and silver/ copper/palladium, where the amount of palladium in these alloys is greater than 0 up to 30% is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. the rejection is maintained.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The variables b and z are not defined in the claims and thus claims 1 and 3-20 are indefinite.

Claims 7 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the steps of actually producing the composition.

In addition, claim 7 is indefinite since it does not teach the relationship between the sinter temperature and the particle growth, which is required in order to determine the maximum growth at a specific temperature. It is noted that the specification teaches there is no relationship and that the particle is maximized when b and z meet the claimed relationship.

The upper limit of x and y are not given and cannot be determined for the information disclosed in the specification. Page 8, lines 12-13 teach in one embodiment, $x+y+z=1$, which indicates that applicant intends for the inventive composition to include compositions where $x+y+z$ is not equal to 1. In addition, the specification teaches the composition can be non-stoichiometric, which means $x+y+z$ need not equal to 1. Therefore it is unclear what x and y ranges applicant considers as his invention. Thus claims 1-20 are indefinite

Applicant argues that b and z are adequately defined but does not explain how they are defined. The inequality does not define either variable since b is not defined and z is defined in terms of b. The fact that claim 2 defines b does not overcome the rejection since this definition do not define b for claim 1 and all the claimed depending from claim 1. The amendment to claim 7 does not overcome the rejection over claims 7 and 9 since "growing at a specific sinter temperature" does not set forth the actual steps of producing the ceramic. It is noted that the process is now found in amended claim 8. The rejections are maintained.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant regard as their invention. Evidence that the claims fail to correspond in scope with that which applicant regard as the invention can be found in the reply filed 13 December 2007. In that paper, applicant has stated that the ceramic must contain lead, and this statement indicates that the invention is different from what is defined in the claims because a can be 1 and thus lead need not be present in the claimed ceramic.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/cmk/
February 14, 2008

/C. Melissa Koslow/
Primary Examiner
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